Human CD45RO PE-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # UCHL1
Catalog Number: FAB10642P
100 Tests

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD45RO in direct ELISAs.
Source	Monoclonal Mouse IgG_{2A} Clone # UCHL1
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Cultured T cells from an IL-2-dependent T-cell line (CA1) prepared from human peripheral blood activated with influenza virus.
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

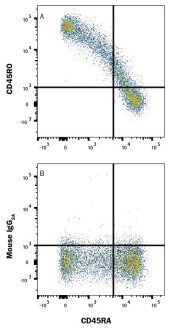
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	10 µL/10^6 cells	Human PBMC

DATA

Flow Cytometry



Detection of CD45RO in Human PBMC Lymphocytes by Flow Cytometry. Human PBMC were stained with (A) Mouse Anti-Human CD45RO PE-conjugated Monoclonal Antibody (Catalog # FAB10642P) or (B) Mouse IgG2A Isotype Control Antibody (Catalog # IC003P) and Mouse Anti-Human CD45RA APC-conjugated Monoclonal Antibody. Staining was performed using our Staining Membrane-associated Proteins protocol.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** • 12 months from date of receipt, 2 to 8 °C as supplied.

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BACKGROUND

CD45, previously called LCA (leukocyte common antigen), T200, or Ly5 in mice, is member C of the class 1 (receptor-like) protein tyrosine phosphatase family (PTPRC) (1, 2). It is a variably glycosylated 180-220 kDa transmembrane protein that is abundantly expressed on all nucleated cells of hematopoietic origin (1-3). Multiple splicing isoforms of exon 4 (A), 5 (B), and 6 (C) are expressed according to cell type, developmental stage and antigenic exposure (1-5). The longest form, CD45RABC (called B220 in mouse) is expressed on B lymphocytes, The shortest form, CD45R0, lacking exons 4, 5 and 6 which encode aa 34-194, is expressed on memory cells, while intermediate sizes are expressed on other T cells (3, 4, 6). Human CD45 has a 40% and 41% sequence identity with mouse and rat respectively. The CD45R0 cDNA encodes 1145 amino acids (aa), including a 25 aa signal sequence, a 391 aa extracellular domain, 21 aa transmembrane sequence, and a 708 aa cytoplasmic domain that contains two phosphatase domains, D1 and D2. Only D1 has phosphatase activity. CD45 has been best studied in T cells, where it determines T cell receptor signaling thresholds (3, 6-8). CD45 is moved into or out of the immunological synapse (IS) membrane microdomain depending on the relative influence of interaction with the extracellular galectin lattice or the intracellular actin cytoskeleton (9, 10). Galectin interaction can be fine-tuned by varying usage of the heavily O-glycosylated spliced regions and sialylation of N-linked carbohydrates (4, 9). Within the IS, CD45 dephosphorylates and negatively regulates the Src family kinase, Lck (8-10). In other leukocytes, CD45 influences differentiation and links immunoreceptor signaling with cytokine secretion and cell survival, partially overlapping in function with DEP-1/CD148 (11-14). CD45 deletion causes in severe immunodeficiency, while point mutations may be associated with autoimmune disorders (6, 7).

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